RESEARCH PROBLEM STATEMENT

Problem Title: Access Management Performance Index **No.:**05.05-3

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1. Briefly describe the problem to be addressed:

The purpose of this project is to develop a performance index to target facilities that would receive the greatest benefit from the implementation of access management principles. This would be accomplished by collecting existing data by facility type and determining the impact that access management techniques have had on safety and economics at these locations. With the data collected, a performance index would be established to target facilities by volume, crash rate, speed, signal spacing, and other factors in an effort to determine the best use of access management principles and applications. The resulting performance index could then be tied to the LRP, TIP, and STIP to target and prioritize areas for access management implementation.

UDOT and their Consultants have updated the Administrative Rule relating to access management and the subsequent access management program that aims to provide guidance to Department personnel in maintaining and preserving both existing and future capacity on the state roadway network. The success of access management programs has been at the forefront of state DOTs across the nation. The Utah Rule, R930-6, relating to access management, provides guidance for design, operations, and project managers to better implement access management techniques in both existing and future projects. It is critical that the state of Utah be at the forefront in developing long-term preservation of businesses, access, and safety of the traveling public.

Strategic Goal: ☒ Preservation ☒ Operation ☒ Capacity ☒ Safety (Check all that apply)

2. List the research objective(s) to be accomplished:

1. Development of a performance index to help prioritize access management projects statewide.
2. Utilization of the GIS enabled web delivered data almanac to aid in identifying target locations.
3. Target roadways that would benefit from access management implementations based on the performance index results.

3. List the major tasks required to accomplish the research objective(s): 1 year Estimated person-hours 1,600

1. Literature review to establish the state of the practice on access management performance index evaluation.
2. Identify facilities where access management principles have been implemented as well as facilities where they have not.
3. Utilize the GIS enabled web delivered data almanac to summarize crash and AADT data at target locations.
4. Develop a performance index based on the results of the data collected.
5. Provide recommendations on future access management implementation statewide.

4. Outline the proposed schedule (when do you need this done, and how we will get there):

It is recommended that this project begin in late Fall 2005, early Winter 2006 with the literature review and data collection.

Develop relationships between data collection sites and develop performance index during the Summer 2006.

Provide recommendations for access management installation at the end of the Summer, beginning of Fall 2006.

5. Indicate type of research and / or development project this is:

Large: ☒ Research Project ☐ Development Project
Small: ☐ Research Evaluation ☐ Experimental Feature ☐ New Product Evaluation ☐ Tech Transfer Initiative:
☐ Other_____

6. What type of entity is best suited to perform this project (University, Consultant, UDOT Staff, Other Agency, Other)?

University and UDOT Staff joint participation.

7. What deliverable(s) would you like to receive at the end of the project? (e.g. useable technical product, design method, technique, training, workshops, report, manual of practice, policy, procedure, specification, standard, software, hardware, equipment, training tool, etc.)

The deliverables expected from this project would include: 1) an evaluation of access management projects statewide, 2) development of a set performance standards from the access management sites, 3) implementation of access management performance indices in the UDOT Design Manual, and 4) application of the performance index for future planning projects.

8. Describe how this project will be implemented at UDOT.

This project will be implemented at UDOT jointly through the access management and planning programs. The results of the study will be very useful in aiding in the process to target facilities that would receive the most benefit from the implementation of various access management initiatives.

9. Describe how UDOT will benefit from the implementation of this project, and who the beneficiaries will be.

UDOT will benefit in all divisions through a new process to better identify locations and corridor segments where access preservation and safety can be improved through access management treatments.

10. Describe the expected risks, obstacles, and strategies to overcome these.

No known risks.

11. List the key UDOT Champion of this project (person who will help Research steer and lead this project, and will participate in implementation of the results): Tim Boschert, Access Management/Program Coordinator, (801) 965-4175

12. Estimate the cost of this research study including implementation effort (use person-hours from No. 3):$35,000

13. List other champions (UDOT and non-UDOT) who are interested in and willing to participate in the Technical Advisory Committee for this study:

Name	Organization/Division/Region	Phone	Attended UTRAC?
A) Grant Schultz	Brigham Young University	(801) 422-6332	
B) Glen Ames	UDOT Planning	(801) 965-4953	
C) Chris Glazier	UDOT ISS	(801) 965-4381	
D) Rob Clayton	UDOT Safety Programs Engineer	(801) 964-4521	
E) Doug Anderson	UDOT Research Project Manager	(801) 965-4377	
F)			
G)			

14. Identify other Utah agencies, regional or national agencies, or other groups that may have an interest in supporting this study: TRB Access Management Committee, NCHRP